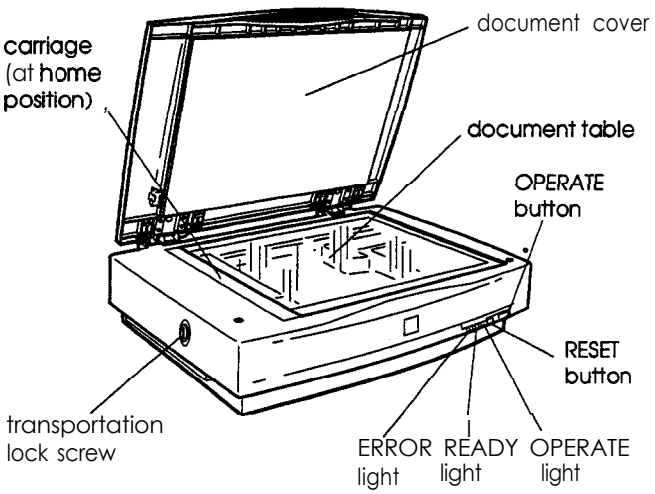
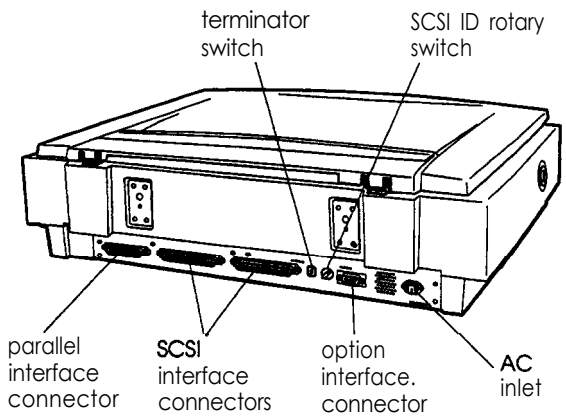



## Scanner Specifications

| | |
|---|---|
| Scanner type: | Flatbed, color |
| Photoelectric device: | Color CCD (Charged Coupled Device) line sensor |
| Effective pixels: | 9760 dots by 13760 dots at 800 dpi, 100% |
| Maximum document size: | 12.2 inches x 17.2 inches (310 mm x 437 mm); up to A3 or US B size. Reading area can be specified from software. |
| Scanning resolution: | 800 dpi main, 1600 dpi sub |
| Output resolution: | 50 to 3200 dpi in 1 dpi increments. Values above 800 interpolated through software. |
| Command level: | ESC/I-B8 (B6+Focus Control) |
| Scanning speed (A3/portrait at 800 dpi draft mode): | Line art: Approx. 10.8ms/line<br>256 gray levels: Approx. 10.8ms/line<br>Full color: Approx. 15ms/line |
| Adjustable focusing function: | One-piece CCD/lens movement system. Focus adjustable up to 5mm above the surface of the document table. |
| Color separation: | RGB color filters on CCD |
| Reading sequence: | Monochrome mode:<br>One-pass scanning<br>Color line sequence mode:<br>One-pass scanning (R, G, B) |
| Zoom: | 50 to 200% in 1% increments |
| Image data: | 12 bits input (optical density of 3.3)<br>8 or 12 bits output |
| Brightness: | 7 levels |
| Line art settings: | Fixed threshold with TET (Text Enhancement Technology) enabled |
| Interface: | Bidirectional parallel and SCSI |
| Light source: | Xe-gas cold cathode fluorescent lamp |
| Reliability: | Main unit MCBF: 100,800 cycles of carriage movements |
| Dimensions: | Width: 25.8 inches (656 mm)<br>Depth: 18.0 inches (458 mm)<br>Height: 6.7 inches (170 mm) |
| Weight: | About 44.1 lb (20 kg) |

## Electrical Specifications

| | |
|---|---|
| Input voltage range: | 100 to 240 VAC<br>Universal autoswitching |
| Rated frequency: | 50 to 60 Hz |
| Input frequency: | 49.5 to 60.5 Hz |
| Rated current: | 1.2 A (input AC 100V)<br>0.7 A (input AV 200V) |
| Power consumption: | Approx. 60 W, 75 W maximum with optional unit |
| Insulation resistance: | 10 M Ohms at 500VDC (between AC line and chassis) |

## Environmental Conditions

| | |
|---|---|
| Temperature: | Operation: 41° F to 95 F (5° C to 35 C)<br>Storage: –13° F to 140° F (–25° C to 60 C) |

| | |
|---|---|
| Humidity: | Operation: 10% to 80%, without condensation<br>Storage: 10% to 85%, without condensation |
| Operating conditions: | Ordinary office or home conditions.<br>Avoid extremely dusty conditions, direct sunlight, or strong light sources. |

## Safety Standards

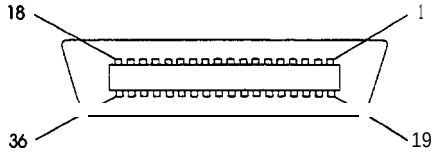
UL1950 with D3, CSA C22.2 950 with D3

EMC: FCC Part 15 subpart B class B (USA)
CSA C108.8 class B (Canada)

## Parallel Interface Specifications

| | |
|---|---|
| Interface type: | Bidirectional parallel interface |
| Data format: | 8-bit parallel |
| Synchronization: | By external strobe pulse |
| Handshaking: | By ACKNLG and BUSY signals |
| Logic level: | Input/output data and interface control signals are TTL compatible |
| Connector type: | 36-pin Centronics® type connector |

Connector pin arrangement:



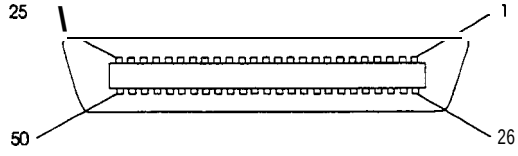

*Bidirectional parallel interface pin assignments*

| Pin no. | Signal | I/O | Description |
|---|---|---|---|
| 1 | STROBE | I | Data strobe pulse |
| 2–9 | DATA 0 to 7 | I/O | 8-bit data bus |
| 10 | ACK | O | Acknowledge signal |
| 11 | BUSY | O | Scanner busy signal |
| 12 | NC | — | Not used |
| 13 | GND | — | Ground |
| 14–15 | NC | — | Not used |
| 16 | GND | — | Ground |
| 17 | C_GND | — | Frame ground |
| 18 | NC | — | Not used |
| 19–30 | GND | — | Ground |
| 31 | INIT | I | Scanner reset signal. The pulse width at the receiving terminal must be longer than 50 µs. |
| 32 | NC | — | Not used |
| 33 | GND | — | Ground |
| 34,35 | NC | — | Not used |
| 36 | DIR | I | Direction |

## SCSI Interface Specifications

| | |
|---|---|
| Interface type: | ANSI Standard X3.131-1986 |
| Logic level: | TTL compatible |
| Electrical standard | ANSI Standard X3.131-1986 |
| ID number: | Selectable from 0 to 7 |
| Connector type: | Two 50-pin connectors |
| Terminator: | Internal terminator selectable |

Connector pin arrangement:




*SCSI pin assignments:*

| Pin no. | Signal | I/O | Description |
|---|---|---|---|
| 1–12, 14–25, 35–37, 39, 40, 42 | GND | — | Signal ground |
| 13 | NC | — | Not used |
| 26–33 | DB0–DB7 | I/O | Data bus 0–7 |
| 34 | DBP | I/O | Data bus parity |
| 38 | TERMPWR | — | Terminator power |
| 41 | ATN | I | Attention |
| 43 | BSY | I/O | Busy |
| 44 | ACK | I | Acknowledge |
| 45 | RST | I | Reset |
| 46 | MSG | O | Message |
| 47 | SEL | I/O | Select |
| 48 | C/D | O | Command/data |
| 49 | REQ | O | Request |
| 50 | I/O | O | Input/output |

## Initialization

When the scanner is initialized (returned to a fixed set of conditions), it terminates scanning and the carriage returns to the home position (rear of the scanner).

| | |
|---|---|
| Hardware initialization | • When the power is turned on<br>• When the scanner parallel interface receives an INIT signal (pin 31 goes LOW)<br>• When the scanner receives a SCSI Reset signal at the SCSI interface |
| Software initialization | * When the scanner receives the software command ESC @ (initialize the scanner)<br>• When the scanner receives a SCSI Bus Device Message |

## Problems and Solutions

Some problems you may have while using the scanner may involve the operation of your software and computer, such as:

- ❑ Incorrect setup of the parallel or SCSI interface
- ❑ Inappropriate selection of the scanner functions
- ❑ Incorrect setup of your computer or software
- ❑ Incorrect operation of your software.

Also see the documentation that came with your software, computer, and printer for possible solutions.

### Indicator lights

If an error occurs, the scanner stops operating and the READY and ERROR lights indicate the type of error.

| Error type | READY light | ERROR light |
|---|---|---|
| Command error | On | On |
| Interface error | Off | Flashing |
| Fatal error | Flashing | Flashing |
| Option error | Off | Off |

### Command error

The scanner received incorrect commands from your scanning software.

If this error occurs, try rescanning the document. The scanner returns to normal when it receives correct commands. Normally you do not need to reset the scanner.

### Interface error

The interface setup is wrong, or the scanner is not properly connected to the computer.

If this error occurs, check the interface connection Then push the RESET button or turn the scanner off and then back on to reset it.

### Fatal error

One of the following problems occurred:

- ❑ The transportation lock screw is not released.
- ❑ There is a problem with the optional transparency unit or the automatic document feeder, such as an open cover.
- ❑ The fluorescent lamp needs to be replaced.
- ❑ The scanner is inoperative.

If this error occurs, check that the transportation lock screw is released and check any installed options; then push the RESET button. If the scanner still does not operate properly, try turning the scanner off and then back on If the scanner still does not operate properly, or if this error occurs repeatedly, consult your dealer.

### Option error

This indicates a problem with an installed option, such as jammed paper in the auto document feeder. If this error occurs, check the option and correct the cause of the trouble.

## Optional Equipment Specifications

### Automatic Document Feeder (B813112)

The automatic document feeder (ADF) option allows you to stack up to 50 sheets and scan them automatically. This is especially helpful for optical character recognition (OCR) scanning of text. The ADF replaces the scanner cover but still allows scanning of individual items.

| | |
|---|---|
| ADF type: | Page transportation and duplex scanning with automatic reverse |
| Document transportation: | Document center alignment; fed face up from the bottom; face up ejection |
| Document replacement time: | 1.2 seconds (A4/LT landscape) |
| supported document size: | Portrait: A3, Ledger, B4, Legal, A4, Letter, B5, A5, 5.5 x 5.8 inches (140 x 148 mm)<br>Landscape: A4, Letter, B5, A5 |
| Feeding capacity: | 50 sheets of 21 lb (80 g/m$^2$) paper, size A4 (landscape/portrait) or Letter (landscape/portrait) or smaller;<br>30 sheets of 21 lb (80 g/m$^2$) paper, size B4, Legal, or larger |
| Eject capacity: | 100 sheets |
| Paper types: | Bond paper, average to high quality paper, or fine ink jet paper |

*Note:*
*Do not use the following paper types: Tracing paper; coated paper; pasted paper; labels; OHP film; carbon paper; catalog paper; stapled paper; clipped paper; paper with holes (such as loose-leaf paper); ripped, curled, or bent paper; or special paper (such as rice paper).*

| | |
|---|---|
| Paper thickness: | 13 to 33 lb (50 to 127 g/m$^2$) |
| Power supply: | Supplied through scanner<br>DC24V ± 10%<br>DC5V ± 10% |
| current consumption: | DC24V: 2.0A<br>DC5V: 0.3A |
| Temperature: | Operation: 41 to 95 F (5 to 35 C)<br>Storage: -13 to 140 F (–25 to 60° C) |
| Humidity (without condensation): | Operation: 10 to 80%<br>Storage: 10 to 85% |

| | |
|---|---|
| Reliability: | Paper feeding and ejecting life: 100,000 sheets<br>Hinge: 100,000 close motions or more |
| Safety regulations: | UL1950, CSA950, FCC |
| CE marking: | Directive 89/336EEC, 92/31 EEC, 73/23 EEC |
| Weight: | 35 lb (16 kg) |
| Dimensions: | 23.6 x 20.8 x 4.8 inches<br>(601 × 529 × 122 mm) |

### Transparency Unit (B813102)

The transparency unit option allows you to scan slides, negatives, and transparencies up to 11.4 x 16.5 inches (A3 or US B size). The transparency unit replaces the scanner cover but still allows scanning of individual items.

| | |
|---|---|
| TPU type: | Lamp movement scanning system with the document fixed |
| Lamp source: | Xe-gas cold cathode fluorescent lamp |
| Maximum document size: | 11.4 x 16.5 inches (290 x 420 mm)<br>A3 or US B size |
| Color separation | Color filter separation (R/G/B) |
| Document type: | Positive or negative film |
| Document size: | 35 mm film (strip or mount)<br>Brownie<br>4 × 5 inch<br>8 × 10 inch |
| Power supply: | Supplied through scanner<br>(+24V/+5VDC) |
| current consumption: | +24VDC: 1.3A<br>+5VDC: 0.3A |
| Temperature: | Operation: 41 to 95° F (5 to 35 C)<br>Storage: -13 to 140 F (-25 to 60 C) |
| Humidity (without condensation): | Operation: 10 to 80%<br>Storage: 10 to 85% |
| Reliability: | MCBF: Carriage = 100,000 returns |
| Weight | 13.2 lb (6 kg) |
| Dimensions: | 25.8 x 17.8 x 2.24 inches<br>(656 × 452 × 57 mm) |
| Transportation screws: | Mount in outside holes (marked CLAMP), stored in inside holes (marked STOCK) |

## Scanner Bundled Kits

The scanner is available in a bundled kit that includes software for operating the scanner in a PC or Maintosh environment. The kit includes the following:

EPSON Expression™ 836XL scanner
Adaptec® SCSI board
SCSI cable
SCSI Select utility
EPSON TWAIN Pro driver software (Windows and Macintosh)
LaserSoft SilverFast® for Expression 836XL Plug-in for PhotoShop (Windows and Macintosh1
Adobe® Photoshop® LE (Windows and Macintosh)
Pixel Translation ISIS driver (Windows and Macintosh)
Monaco Systems color calibration software (Windows and Macintosh)

## Information Reference List

Engineering Change Notices

None

### Product Support Bulletins

None

Technical Support Bulletins

None

### Related Documentation

| | |
|---|---|
| TM-EXPR836XL | Expression 836XL Service Manual |
| PL-EXPR836XL | Expression 836XL Parts Price List |
| E836XL1097-00 | Expression 836XL User s Guide (online) |
| ETP1097-00 | EPSON TWAIN Pro User s Guide (online) |
| L1097-00 | LaserSoft SilverFast for Expression 836XL User s Guide (online) |
| CPD5711 | Expression 836XL Setup Guide |
| TM-B813102 | Transparency Unit Service Manual |
| PL-B813102 | Transparency Unit Parts Price List |
| TM-B813112 | Auto Document Feeder Service Manual |
| PLB813112 | Auto Document Feeder Parts Price List |